UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/864,107	05/24/2001	Filips Van Liere	NL 000278	1459

24737   7590   09/20/2006

PHILIPS INTELLECTUAL PROPERTY & STANDARDS
P.O. BOX 3001
BRIARCLIFF MANOR, NY 10510

EXAMINER
WANG, JIN CHENG

ART UNIT	PAPER NUMBER
2628	

DATE MAILED: 09/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Office Action Summary	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>24 July 2006</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-3,5-12,14-19 and 25-33</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-3, 5-12, 14-19, 25-33</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

        1.☐ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____.

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Response to Amendment

A request for continued examination under 37 CFR 1.114, including the fee set forth in

37 CFR 1.17(e), was filed in this application after final rejection. Since this application is

eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e)

has been timely paid, the finality of the previous Office action has been withdrawn pursuant to

37 CFR 1.114. Applicant's submission filed on 7/24/2006 has been entered. Claims 1 and 25

have been amended. Claims 4, 13 and 20-24 have been canceled. Claims 1-3, 5-12, 14-19, 25-33

are pending in the application.

Response to Arguments

Applicant's arguments with respect to claim 1 and similar claims have been considered

but are moot in view of the new ground(s) of rejection based on Echerer et al. U.S. Pat. No.

5,740,267 (hereinafter Echerer) in view of Fenster et al. U.S. Pat. No. 5,454,371 (hereinafter

Fenster) and Stockham et al. U.S. Pat. No. 6,081,267 (hereinafter Stockham).

Echerer further discloses enabling the generation of the measurement graphics <u>without</u>

<u>activation of </u>ACTION BARS or image fields, OR CONTROL PANELS since Echerer teaches

using a mouse only without activating ACTION BARS or image fields, OR CONTROL

PANELS. See e.g., column 12, lines 20-30; column 13, lines 25-50; column 15, lines 15-35.

Echerer teaches measuring the length of the two points, measuring an area encircled by at least

three points and measuring the angle between two lines formed by four points wherein the four

points are specified as in column 21 for measuring the angle. Echerer discloses enabling the

generation of the measurement graphics without requiring a user to define a type of graphic

being generated through the automatic analysis file wherein the measurement graphics is

automatically generated (See column 17-18).

Fenster discloses that the user can use the graphical input device such as a single button

mouse to measure distances and areas of the three-dimensional image within the most recently

moved image plane and the user simply needs to use the graphical input device 38 to indicate the

two end points over which the distance is to be measured if the user wishes to measure a distance

and the user must identify at least three points if an area is to be measured and the placement of

points on the image is done by moving a cursor and the display module 92 connects adjacent

points by straight line segments and computes both the overall line length and the area bounded

by the lines joining the points using an appropriate scale. **In this setting, only a mouse has been**

placed on the points of the image to measure a distance or an area without activation of

menus, toolbars and control panels outside the medical image.

When the pointer symbol is situated on the medical image, a measurement graphics is

generated without actuation of one button of the mouse on menus, toolbars and control panels

because the pointer symbol is situated on the medical image while the measurement graphics is

generated. The pointer symbol is not situated on menus, toolbars and control panels when the

pointer symbol is situated on the medical image. Therefore, the actuation of the at least one

button of the mouse enables the generation of the plurality of different measurement graphics

including measuring the distance of two points on the medical image and the area encircled by

three points on the medical image without actuating at least a button of the mouse when the

pointer symbol of the mouse is situated on menus, toolbars and control panels, i.e., when the

pointer symbol is subsequently moved away from the medical image after the generation of the

measurement graphics. Fenster discloses enabling the generation of the plurality of different

measurement graphics including the measurement of distance between two points on the medical

image and the measurement of area encircled by more than two points on the medical image

based only upon actuation of at least one button of said mouse when said pointer symbol is

situated on said medical image without clicking on the mouse, even when the pointer symbol is

moved outside the medical image and placed on the menus, toolbars, and control panels outside

the medical image after the measurement graphics is generated. Fenster discloses enabling the

generation of the plurality of different measurement graphics including the measurement of

distance between two points on the medical image and the measurement of area encircled by

more than two points on the medical image based only upon actuation of at least one button of

said mouse when said pointer symbol is situated on said medical image without the actuation of

the at least one button of the mouse when said pointer symbol is subsequently moved away from

the medical image and placed on menus, toolbars, and control panels. Because the pointer

symbol is placed on the medical image in the generation of the measurement graphics, the

measurement graphics are generated without the movement of the pointer symbol outside of the

medical image while the measurement graphics is generated. In conclusion, Fenster discloses the

claim limitation of enabling the generation of the plurality of different measurement graphics

based only upon actuation of said at least one button of said mouse when said pointer symbol is

situated on said medical image without actuation of said at least one button of said mouse when

said pointer symbol is situated on menus, toolbars, and control panels such that the measurement

graphics are generated without movement of said pointer symbol outside of said medical image.

According to MPEP 2106, Office personnel are to give claims their broadest reasonable interpretation in light of the supporting disclosure. *In re Morris, 127 F.3d 1048, 1054-55, 44 USPQ2d 1023, 1027-28 (Fed. Cir. 1997)*. Limitations appearing in the specification but not recited in the claim are not read into the claim. *E-Pass Techs., Inc. v. 3Com Corp., 343 F.3d 1364, 1369, 67 USPQ2d 1947, 1950 (Fed. Cir. 2003)* (claims must be interpreted 'in view of the specification' without importing limitations from the specification into the claims unnecessarily).*In re Prater, 415 F.2d 1393, 1404-05, 162 USPQ 541, 550-551 (CCPA 1969). See also In re Zletz, 893 F.2d 319, 321-22, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989)*.

However Echerer is silent to "displaying...said medical image...without the presence of menus, toolbars and control panels on said graphical interface", "enabling the generation of the at least three measurement graphics without requiring a user to define in advance the type of measurement graphic being generated".

Fenster teaches the claim limitation of "displaying...said medical image...without the presence of menus, toolbars and control panels on said graphical interface" (*Fenster discloses in column 23, lines 25-40 and Fig. 27 using the graphical input device to measure distances and areas of the three-dimensional image within the most recently moved plane without the presence of menus, toolbars and control panels on said graphical interface. Fenster teaches that the user uses the graphical input device to indicate the two end points over which the distance is to be measured and the user must identify at least three points if an area is to be measured. Fenster also teaches generating the measurement graphics without moving the pointer outside the medical image*).

It would have been obvious to one of ordinary skill in the art to have incorporated the

Fenster's measurement method into Echerer's method of processing cursored user interaction

because Echerer implicitly suggests providing a menu-less graphical interface for display said

medical image (e.g., Echerer column 12, lines 20-30; column 13, lines 25-50) and providing a

predefined interaction with said medical image, wherein said interaction is selected from a group

of predefined interactions based on said status of each of said at least one button during the

interval between multiple said position detection steps (e.g., Echerer column 16, lines 15-67;

column 17, lines 1-67; column 18, lines 1-64) therefore suggesting an obvious modification of

the Echerer's method for processing a radiograph.

One having the ordinary skill in the art would have been motivated to do this because it

would have provided an alternative drawing option that does not rely on the menus, control

panels and toolbars for GUI control (Fenster column 23 and Fig. 27).

Although Echerer and Fenster are silent to "enabling the generation of the at least three

measurement graphics without requiring a user to define in advance the type of measurement

graphic being generated", Fenster discloses enabling the generation of at least two different

measurement graphics based only upon the actuation of the at least one button of the mouse,

Stockham discloses enabling the generation of at least three different measurement graphics

based only upon the actuation of the at least one button of the mouse. Stockham discloses

providing the angle measurement without the presence of the menus, toolbars and control panels

on the medical image (See column 3, lines 40-45) and measuring the linear distance, angle,

rectangular ROI, elliptical ROI etc (column 6, lines 1-5) and thereby Stockham discloses

enabling the generation of the at least three measurement graphics without requiring a user to

define in advance the type of measurement graphic being generated. Therefore, having the

combined teaching of Echerer, Fenster and Stockham, one of the ordinary skill in the art realize

how to generate at least three different measurement graphics based only upon the actuation of

the at least one button of the mouse. Moreover, Echerer discloses enabling the generation of at

least three different measurement graphics without requiring a user to define a type of graphic

being generated through the automatic analysis file wherein the measurement graphics is

automatically generated (See column 17-18). Echerer's generation of the at least three different

measurement graphics is enabled without moving the cursor outside the medical image, i.e.,

through the automatic analysis file. Therefore, Echerer suggests the claim limitation of "enabling

the generation of at least three different measurement graphics based only upon actuation of said

at least one button of said mouse when said pointer symbol is situated on said medical image

such that the measurement graphics are generated without movement of said pointer symbol

outside of said medical image." Echerer's generation of the at least three different measurement

graphics is performed through the automatic analysis file without requiring a user clicking on the

menus, toolbars and control menus to define in advance the type of measurement graphic being

generated. Accordingly to applicant's specification, it is understood that only one measurement

graphics is produced at a time and the type of measurement graphics should be defined through

the mouse operator interface. However, applicant's claim 1 set forth the claim limitation of

"enabling the generation of the at least three measurement graphics without requiring a user to

define in advance the type of measurement graphic being generated."

One having the ordinary skill in the art would have been motivated to do this because it

would have provided an alternative drawing option that does not rely on the menus, control

panels and toolbars for GUI control (Fenster column 23 and Fig. 27; Stockham column 6, lines 1-5 and Figs. 1a-3c).

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 26 and 32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 26 recites "an area measurement formed by a series of at least three points with the first and last points in the series being the same point". However, an area measurement formed by three points with the first and last points in the series of three points being the same point would be an area with only two distinct points because the first point and the last point of the three points are the same point, only the second point of the three point is different from the first point and the last point. The three points with the first point and the last point being the same point cannot form an area.

The claim 32 is subject to the same rationale of rejection set forth in the claim 26.

Claim Rejections - 35 USC § 103

1.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are

such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2.   Claims 1-3, 5-12, 14-19, 26-30 and 32-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Echerer et al. U.S. Pat. No. 5,740,267 (hereinafter Echerer) in view of Echerer et al. U.S. Pat. No. 5,740,267 (hereinafter Echerer) in view of Stockham et al. U.S. Pat. No. 6,081,267 (hereinafter Stockham), Weng et al. U.S. Patent No. 5,588,435 (hereinafter Weng).

3.   Re Claim 1:

Echerer teaches a method for providing and processing a cursored user interaction (column 8, lines 37-67, column 9, lines 1-23) with a spatially displayed medical image (column 7, lines 21-29) and producing graphics related data on said medical image (column 12, lines 42-56), wherein said method comprises the steps of:

Controlling a mouse computer interface device, having at least one button (e.g., column 12, lines 20-30; column 13, lines 25-50);

Displaying a pointer symbol on said graphical interface, wherein said pointer symbol (e.g., a cursor) represents a current position of said mouse on said graphical interface (e.g., column 8, lines 35-55; column 12, lines 20-30; column 13, lines 25-50);

Tracking a status of each of said at least one button (e.g., column 12, lines 20-30; column 13, lines 25-50);

Detecting a position of said mouse, wherein said position detection step is activated upon actuation of one of said at least one button (e.g., column 12, lines 20-30; column 13, lines 25-50; column 15, lines 15-35); and

Generating one of a plurality of measurement graphics related to a predefined set of measurement operations on said medical image upon at least one actuation of said at least one button, wherein one of the measurement graphics is an angle value quantity (*herein only mouse is being used instead of the user interface constructs such as ACTION BARS or SCROLLABLE PANEL AREAS; see e.g., column 12, lines 20-30; column 13, lines 25-50; column 15, lines 15-35; Echerer teaches measuring the length of the two points, measuring an area encircled by at least three points and measuring the angle between two lines formed by four points wherein the four points are specified as in column 21 for measuring the angle*).

Enabling the generation of the plurality of at least three different measurement graphics using said mouse without activation of toolbars and control panels such that the measurement graphics are generated without movement of said pointer symbol outside of said medical image (*e.g., column 12, lines 20-30; column 13, lines 25-50; column 15, lines 15-35*), and

Enabling the generation of the at least three measurement graphics without requiring a user to define in advance the type of measurement graphics being generated (*e.g., column 12, lines 20-30; column 13, lines 25-50; column 15, lines 15-35*).

In other words, Echerer further discloses enabling the generation of the measurement graphics <u>without activation of</u> ACTION BARS or image fields, OR CONTROL PANELS since Echerer teaches using a mouse only without activating ACTION BARS or image fields, OR CONTROL PANELS. See e.g., column 12, lines 20-30; column 13, lines 25-50; column 15, lines 15-35. Echerer teaches measuring the length of the two points, measuring an area encircled by at least three points and measuring the angle between two lines formed by four points wherein the four points are specified as in column 21 for measuring the angle. Echerer discloses enabling

the generation of the measurement graphics without requiring a user to define a type of graphic

being generated through the automatic analysis file wherein the measurement graphics is

automatically generated (See column 17-18).

Fenster discloses that the user can use the graphical input device such as a single button

mouse to measure distances and areas of the three-dimensional image within the most recently

moved image plane and the user simply needs to use the graphical input device 38 to indicate the

two end points over which the distance is to be measured if the user wishes to measure a distance

and the user must identify at least three points if an area is to be measured and the placement of

points on the image is done by moving a cursor and the display module 92 connects adjacent

points by straight line segments and computes both the overall line length and the area bounded

by the lines joining the points using an appropriate scale. **In this setting, only a mouse has been**

placed on the points of the image to measure a distance or an area without activation of

menus, toolbars and control panels outside the medical image.

When the pointer symbol is situated on the medical image, a measurement graphics is

generated without actuation of one button of the mouse on menus, toolbars and control panels

because the pointer symbol is situated on the medical image while the measurement graphics is

generated. The pointer symbol is not situated on menus, toolbars and control panels when the

pointer symbol is situated on the medical image. Therefore, the actuation of the at least one

button of the mouse enables the generation of the plurality of different measurement graphics

including measuring the distance of two points on the medical image and the area encircled by

three points on the medical image without actuating at least a button of the mouse when the

pointer symbol of the mouse is situated on menus, toolbars and control panels, i.e., when the

pointer symbol is subsequently moved away from the medical image after the generation of the measurement graphics. Fenster discloses enabling the generation of the plurality of different measurement graphics including the measurement of distance between two points on the medical image and the measurement of area encircled by more than two points on the medical image based only upon actuation of at least one button of said mouse when said pointer symbol is situated on said medical image without clicking on the mouse, even when the pointer symbol is moved outside the medical image and placed on the menus, toolbars, and control panels outside the medical image after the measurement graphics is generated. Fenster discloses enabling the generation of the plurality of different measurement graphics including the measurement of distance between two points on the medical image and the measurement of area encircled by more than two points on the medical image based only upon actuation of at least one button of said mouse when said pointer symbol is situated on said medical image without the actuation of the at least one button of the mouse when said pointer symbol is subsequently moved away from the medical image and placed on menus, toolbars, and control panels. Because the pointer symbol is placed on the medical image in the generation of the measurement graphics, the measurement graphics are generated without the movement of the pointer symbol outside of the medical image while the measurement graphics is generated. In conclusion, Fenster discloses the claim limitation of enabling the generation of the plurality of different measurement graphics based only upon actuation of said at least one button of said mouse when said pointer symbol is situated on said medical image without actuation of said at least one button of said mouse when said pointer symbol is situated on menus, toolbars, and control panels such that the measurement graphics are generated without movement of said pointer symbol outside of said medical image.

According to MPEP 2106, Office personnel are to give claims their broadest reasonable

interpretation in light of the supporting disclosure. *In re Morris, 127 F.3d 1048, 1054-55,*

44 USPQ2d 1023, 1027-28 (Fed. Cir. 1997). Limitations appearing in the specification but not

recited in the claim are not read into the claim. *E-Pass Techs., Inc. v. 3Com Corp., 343 F.3d*

1364, 1369, 67 USPQ2d 1947, 1950 (Fed. Cir. 2003) (claims must be interpreted 'in view of the

specification' without importing limitations from the specification into the claims

unnecessarily).*In re Prater, 415 F.2d 1393, 1404-05, 162 USPQ 541, 550-551 (CCPA 1969).*

See also In re Zletz, 893 F.2d 319, 321-22, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989).

However Echerer is silent to "displaying...said medical image...without the presence of

menus, toolbars and control panels on said graphical interface", "enabling the generation of the

at least three measurement graphics without requiring a user to define in advance the type of

measurement graphic being generated".

Fenster teaches the claim limitation of "displaying...said medical image...without the

presence of menus, toolbars and control panels on said graphical interface" (*Fenster discloses in*

column 23, lines 25-40 and Fig. 27 using the graphical input device to measure distances and

areas of the three-dimensional image within the most recently moved plane without the presence

of menus, toolbars and control panels on said graphical interface. Fenster teaches that the user

uses the graphical input device to indicate the two end points over which the distance is to be

measured and the user must identify at least three points if an area is to be measured. Fenster

also teaches generating the measurement graphics without moving the pointer outside the

medical image).

It would have been obvious to one of ordinary skill in the art to have incorporated the

Fenster's measurement method into Echerer's method of processing cursored user interaction

because Echerer implicitly suggests providing a menu-less graphical interface for display said

medical image because Echerer's medical image is not covered by the menus, toolbars and

control panels (e.g., Echerer column 12, lines 20-30; column 13, lines 25-50) and providing a

predefined interaction with said medical image, wherein said interaction is selected from a group

of predefined interactions based on said status of each of said at least one button during the

interval between multiple said position detection steps (e.g., Echerer column 16, lines 15-67;

column 17, lines 1-67; column 18, lines 1-64) therefore suggesting an obvious modification of

the Echerer's method for processing a radiograph.

One having the ordinary skill in the art would have been motivated to do this because it

would have provided an alternative drawing option that does not rely on the menus, control

panels and toolbars for GUI control (Fenster column 23 and Fig. 27).

Although Echerer and Fenster are silent to "enabling the generation of the at least three

measurement graphics without requiring a user to define in advance the type of measurement

graphic being generated", Fenster discloses enabling the generation of at least two different

measurement graphics based only upon the actuation of the at least one button of the mouse,

Stockham discloses enabling the generation of at least three different measurement graphics

based only upon the actuation of the at least one button of the mouse. Stockham discloses

providing the angle measurement without the presence of the menus, toolbars and control panels

on the medical image (See column 3, lines 40-45) and measuring the linear distance, angle,

rectangular ROI, elliptical ROI etc (column 6, lines 1-5) and thereby Stockham discloses

enabling the generation of the at least three measurement graphics without requiring a user to define in advance the type of measurement graphic being generated. Therefore, having the combined teaching of Echerer, Fenster and Stockham, one of the ordinary skill in the art realize how to generate at least three different measurement graphics based only upon the actuation of the at least one button of the mouse. Moreover, Echerer discloses enabling the generation of at least three different measurement graphics without requiring a user to define a type of graphic being generated through the automatic analysis file wherein the measurement graphics is automatically generated (See column 17-18). Echerer's generation of the at least three different measurement graphics is enabled without moving the cursor outside the medical image, i.e., through the automatic analysis file. Therefore, Echerer suggests the claim limitation of "enabling the generation of at least three different measurement graphics based only upon actuation of said at least one button of said mouse when said pointer symbol is situated on said medical image such that the measurement graphics are generated without movement of said pointer symbol outside of said medical image." Echerer's generation of the at least three different measurement graphics is performed through the automatic analysis file without requiring a user clicking on the menus, toolbars and control menus to define in advance the type of measurement graphic being generated. Accordingly to applicant's specification, it is understood that only one measurement graphics is produced at a time and the type of measurement graphics should be defined through the mouse operator interface. However, applicant's claim 1 set forth the claim limitation of "enabling the generation of the at least three measurement graphics without requiring a user to define in advance the type of measurement graphic being generated."

One having the ordinary skill in the art would have been motivated to do this because it would have provided an alternative drawing option that does not rely on the menus, control panels and toolbars for GUI control (Fenster column 23 and Fig. 27; Stockham column 6, lines 1-5 and Figs. 1a-3c).

Claim 2:

The claim 2 encompasses the same scope of invention as that of claim 1 except additional claimed limitation that a single-point actuating/positioning assigns an actual pixel position and/or a pixel intensity quantity to the point in question. However, Echerer and Fenster further disclose the claimed limitation that a single-point actuating/positioning assigns an actual pixel position and/or a pixel intensity quantity to the point in question (e.g., Echerer column 12, lines 42-56; Fenster column 19).

Claim 3:

The claim 3 encompasses the same scope of invention as that of claim 1 except additional claimed limitation that a point pair actuating/positioning assigns a distance value to the pair in question. However, Echerer further discloses the claimed limitation that a point pair actuating/positioning assigns a distance value to the pair in question (e.g., column 13, lines 12-49, column 15, lines 9-11).

4.   Claim 5:

The claim 5 encompasses the same scope of invention as that of claim 1 except additional claimed limitation that "multiple-point actuating/positioning for an open or closed point

sequence assigns an area value quantity to a concave region delimited by the sequence in

question". However, Fenster further discloses the claim limitation of multiple-point

actuating/positioning for an open or closed point sequence assigns an area value quantity to a

concave region delimited by the sequence in question (*This is because Fenster discloses in*

column 19 and 4 that the user can use the graphical input device 38 such as a single button

mouse to measure distances and areas of the three-dimensional image within the most recently

moved image plane and the user simply needs to use the graphical input device 38 to indicate the

two end points over which the distance is to be measured if the user wishes to measure a distance

and the user must identify at least three points if an area is to be measured and the placement of

points on the image is done by moving a cursor and the display module 92 connects adjacent

points by straight line segments and computes both the overall line length and the area bounded

by the lines joining the points using an appropriate scale).

5.   Claim 6:

        The claim 6 encompasses the same scope of invention as that of claim 1 except additional

claimed limitation that "a freehand-drawn actuating/positioning for an open or closed point

sequence assigns an area value quantity to a concave region delimited by the sequence in

question". However, Fenster further discloses the claim limitation of a freehand-drawn

actuating/positioning for an open or closed point sequence assigns an area value quantity to a

concave region delimited by the sequence in question (*This is because Fenster discloses in*

column 19 and 4 that the user can use the graphical input device 38 such as a single button

mouse to measure distances and areas of the three-dimensional image within the most recently

moved image plane and the user simply needs to use the graphical input device 38 to indicate the

two end points over which the distance is to be measured if the user wishes to measure a distance

and the user must identify at least three points if an area is to be measured and the placement of

points on the image is done by moving a cursor and the display module 92 connects adjacent

points by straight line segments and computes both the overall line length and the area bounded

by the lines joining the points using an appropriate scale).

6.   Claim 7:

The claim 7 encompasses the same scope of invention as that of claim 1 except additional

claimed limitation of "a multiple-point actuating/positioning for an open or closed point

sequence assigns a poly-line measurement quantity to the sequence so drawn". However,

Fenster further discloses the claim limitation of a multiple-point actuating/positioning for an

open or closed point sequence assigns a poly-line measurement quantity to the sequence so

drawn (*This is because Fenster discloses in column 19 and 4 that the user can use the graphical*

input device 38 such as a single button mouse to measure distances and areas of the three-

dimensional image within the most recently moved image plane and the user simply needs to use

the graphical input device 38 to indicate the two end points over which the distance is to be

measured if the user wishes to measure a distance and the user must identify at least three points

if an area is to be measured and the placement of points on the image is done by moving a cursor

and the display module 92 connects adjacent points by straight line segments and computes both

the overall line length and the area bounded by the lines joining the points using an appropriate

scale).

7.   Claim 8:

The claim 8 encompasses the same scope of invention as that of claim 1 except additional

claimed limitation of "for an open or closed point sequence assigns a poly-line measurement

quantity to the sequence so drawn". However, Fenster further discloses the claim limitation of a

freehand-drawn actuating/positioning for an open or closed point sequence assigns a poly-line

measurement quantity to the sequence so drawn (*This is because Fenster discloses in column 19*

and 4 that the user can use the graphical input device 38 such as a single button mouse to

measure distances and areas of the three-dimensional image within the most recently moved

image plane and the user simply needs to use the graphical input device 38 to indicate the two

end points over which the distance is to be measured if the user wishes to measure a distance

and the user must identify at least three points if an area is to be measured and the placement of

points on the image is done by moving a cursor and the display module 92 connects adjacent

points by straight line segments and computes both the overall line length and the area bounded

by the lines joining the points using an appropriate scale).

8.   Claim 9:

The claim 9 encompasses the same scope of invention as that of Claim 2

except additional claimed limitation of assigning a pixel staticizing to an assigned

geometrical entity. However, Echerer further discloses the claimed limitation of assigning a pixel

staticizing to an assigned geometrical entity (column 9, lines 1-23, column 15, lines 9-11).

9.   Claims 10-12:

The claim 10, 11, 12 encompasses the same scope of invention as that of claim 1, 2, 3

respectively except additional claimed limitation of "an apparatus". However, Echerer further

discloses the claimed limitation of "an apparatus" (column 5, lines 12-37).

10.   Claims 14-18:

The claim 14, 15, 16, 17, 18 encompasses the same scope of invention as that of claim 5,

6, 7, 8, 9 except additional claimed limitation of "an apparatus". However, Echerer further

discloses the claimed limitation of "an apparatus" (column 5, lines 12-37).

Claim 19:

The claim 19 encompasses the same scope of invention as that of claim 1 except

additional claimed limitation of a machine-readable computer program. However, Echerer

further discloses the claimed limitation of "a machine-readable computer program (column 9,

lines 30-36, figures 6-9).

Re Claims 26 and 32:

Echerer discloses enabling the generation of at least three different measurement graphics

without requiring a user to define a type of graphic being generated through the automatic

analysis file wherein the measurement graphics is automatically generated (See column 17-18).

Echerer's generation of the at least three different measurement graphics is enabled without

moving the cursor outside the medical image, i.e., through the automatic analysis file. Echerer

thus discloses the at least three measurement graphics including a distance measurement between

two points, an angle measurement between two lines and an area measurement formed by at least

three points. Stockham discloses providing the angle measurement without the presence of the

menus, toolbars and control panels on the medical image (See column 3, lines 40-45) and

measuring the linear distance, angle, rectangular ROI, elliptical ROI etc (column 6, lines 1-5)

and thereby Stockham discloses enabling the generation of the at least three measurement

graphics without requiring a user to define in advance the type of measurement graphic being

generated.

Re Claims 27 and 33:

Echerer discloses enabling the generation of at least three different measurement graphics

without requiring a user to define a type of graphic being generated through the automatic

analysis file wherein the measurement graphics is automatically generated (See column 17-18).

Echerer's generation of the at least three different measurement graphics is enabled without

placing the cursor on the menus, toolbars and control panels.

Fenster discloses in column 23, lines 25-40 and Fig. 27 using the graphical input device

to measure distances and areas of the three-dimensional image within the most recently moved

plane without the presence of menus, toolbars and control panels on said graphical interface.

Fenster teaches that the user uses the graphical input device to indicate the two end points over

which the distance is to be measured and the user must identify at least three points if an area is

to be measured. Fenster also teaches generating the measurement graphics without moving the

pointer outside the medical image.

Stockham discloses providing the angle measurement without the presence of the menus,

toolbars and control panels on the medical image (See column 3, lines 40-45) and measuring the

linear distance, angle, rectangular ROI, elliptical ROI etc (column 6, lines 1-5) and thereby

Stockham discloses enabling the generation of the at least three measurement graphics without

requiring a user to define in advance the type of measurement graphic being generated.

Claim 28:

Although Echerer is silent to the claim limitation of determining which of the at least

three measurement graphics is generated based on the number of points selected upon actuation

of said at least one button of said mouse, Fenster and Stockham teach the claim limitation.

Fenster discloses in column 23, lines 25-40 and Fig. 27 using the graphical input device

to measure distances and areas of the three-dimensional image within the most recently moved

plane without the presence of menus, toolbars and control panels on said graphical interface.

Fenster teaches that the user uses the graphical input device to indicate the two end points over

which the distance is to be measured and the user must identify at least three points if an area is

to be measured. Fenster also teaches generating the measurement graphics without moving the

pointer outside the medical image.

Stockham discloses providing the angle measurement without the presence of the menus,

toolbars and control panels on the medical image (See column 3, lines 40-45) and measuring the

linear distance, angle, rectangular ROI, elliptical ROI etc (column 6, lines 1-5) and thereby

Stockham discloses enabling the generation of the at least three measurement graphics without

requiring a user to define in advance the type of measurement graphic being generated.

Claim 29:

Although Echerer is silent to the claim limitation of determining which of the at least

three measurement graphics is generated based on the topology of points selected upon actuation

of said at least one button of said mouse, Fenster and Stockham teach the claim limitation.

Fenster discloses in column 23, lines 25-40 and Fig. 27 using the graphical input device

to measure distances and areas of the three-dimensional image within the most recently moved

plane without the presence of menus, toolbars and control panels on said graphical interface.

Fenster teaches that the user uses the graphical input device to indicate the two end points over

which the distance is to be measured and the user must identify at least three points if an area is

to be measured. Fenster also teaches generating the measurement graphics without moving the

pointer outside the medical image.

Stockham discloses providing the angle measurement without the presence of the menus,

toolbars and control panels on the medical image (See column 3, lines 40-45) and measuring the

linear distance, angle, rectangular ROI, elliptical ROI etc (column 6, lines 1-5) and thereby

Stockham discloses enabling the generation of the at least three measurement graphics without

requiring a user to define in advance the type of measurement graphic being generated.

Claim 30:

Although Echerer is silent to the claim limitation of determining which of the at least

three measurement graphics is generated based on the number and topology of points selected

upon actuation of said at least one button of said mouse, Fenster and Stockham teach the claim

limitation.

Fenster discloses in column 23, lines 25-40 and Fig. 27 using the graphical input device

to measure distances and areas of the three-dimensional image within the most recently moved

plane without the presence of menus, toolbars and control panels on said graphical interface.
Fenster teaches that the user uses the graphical input device to indicate the two end points over
which the distance is to be measured and the user must identify at least three points if an area is
to be measured. Fenster also teaches generating the measurement graphics without moving the
pointer outside the medical image.

Stockham discloses providing the angle measurement without the presence of the menus,
toolbars and control panels on the medical image (See column 3, lines 40-45) and measuring the
linear distance, angle, rectangular ROI, elliptical ROI etc (column 6, lines 1-5) and thereby
Stockham discloses enabling the generation of the at least three measurement graphics without
requiring a user to define in advance the type of measurement graphic being generated.

11.   Claims 25 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Echerer
et al. U.S. Pat. No. 5,740,267 (hereinafter Echerer) in view of Fenster et al. U.S. Pat. No.
5,454,371 (hereinafter Fenster), Stockham et al. U.S. Patent No. 6,081,267 (hereinafter
Stockham) and Buxton et al. U.S. Patent No. 5,798,752 (hereinafter Buxton).

        Re Claims 25 and 31:

        However, it is not clear that Echerer, Fenster and Stockham expressly disclose the "triple-
point actuating/positioning".

        Buxton discloses the claim limitation of "triple-point actuation/positioning" (Buxton
column 19, lines 55-67). Buxton discloses measuring the lengths, slopes and coordinates and

slopes using the button tool and measuring the angle of the tripe points clicked wherein the angle

is related to the middle point of the last three point clicked (See Buxton column 19, lines 55-67).

It would have been obvious to have incorporated Buxton's triple-point

actuation/positioning into Echerer, Fenster and Stockham's method because Echerer suggests the

claim limitation by disclosing measuring the angle between two lines formed by four points

wherein the four points are specified as in column 21 for measuring the angle. The example

shows that the four points may be distinct from each other. However, one of the ordinary

recognizes that the four points may include two identical points resulting in a three distinct

points that is the same as what being claimed, i.e., the three point actuating/positioning by the

user through an automatic analysis file specification of the three points for measuring an angle of

the two rays formed by the three points or four points with two identical points. Therefore,

Echerer suggests the claim limitation of "triple-point actuation/positioning".

Moreover, Echerer discloses enabling the generation of the measurement graphics

without requiring a user to define a type of graphic being generated or without requiring a user

specifying the type of graphic being generated using the menus through the automatic analysis

file wherein the measurement graphics is automatically generated (See column 17-18).

Therefore, having the combined teaching of Echerer, Fenster, Stockham and Buxton, one

of the ordinary skill in the art would have been motivated to measure the angle associated with

three points as clicked by the user using the mouse because this allows the use of a click-through

button tool that measures geometric properties (Buxton column 19, lines 55-67).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jin-Cheng Wang whose telephone number is (571) 272-7665. The examiner can normally be reached on 8:00 - 6:30 (Mon-Thu).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kee Tung can be reached on (571) 272-7794. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

jcw